

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE ANNUAL REPORT OF RESEARCH FACILITY (TYPE OR PRINT)	1. CERTIFICATE NUMBER: 43-R-0008 CUSTOMER NUMBER: 1444	FORM APPROVED OMB NO. 0579-0036
Washington University Lindell & Skinker Blvds St Louis, MO 63130 Telephone: (314) -362-3229		

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, or experimentation, or held for these purposes. Attach additional sheets if necessary)

FACILITY LOCATIONS (Sites) - See Attached Listing

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS Form 7023A)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animal being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals an for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for wh the use of appropriate anesthetic, analgesic, or tranquiliz drugs would have adversely affected the procedures, res or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reas such drugs were not used must be attached to this report	F. TOTAL NUMBER OF ANIMALS (COLUMNS C + D + E)
4. Dogs			118		118
5. Cats			9		9
6. Guinea Pigs	36		46		46
7. Hamsters			14	55	69
8. Rabbits		134	431		565
9. Non-human Primates	26		122		122
10. Sheep			21		21
11. Pigs		21	331		352
12. Other Farm Animals					
Goats			15		15
13. Other Animals Bats			94		94
Chinchillas			16		16
Ferrets			5		5
Gerbils			107		107

ASSURANCE STATEMENTS

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, testing, surgery, or experimentation were followed by this research facility.
- 2) Each principal investigator has considered alternatives to painful procedures.
- 3) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC-approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer or Legally Responsible Institutional Official)

OFFICIAL

NAME & TITLE OF CEO OR INSTITUTIONAL OFFICIAL (Type or Print)

DATE SIGNED

(b)(6),(b)(7)(c)

(b)(6),(b)(7)(c)

11-28-06

18-23 (OCT 88), which is obsolete.)

DEC - 4 2006

Protocol Number 20040355. "Influenza A Virus Assembly and Virulence"

Principal Investigator: (b)(6),(b)(7)(c)

Animal Used: Hamster Number Used: 55

Note: Rabbits are included on this protocol, but are classified in Column C

Explain the procedure producing pain or distress

Administration of analgesics during the course of virus infection to relieve disease symptoms will not be performed because this may adversely affect the outcome of the experiments. We are assessing 1) the virulence of virus strains, and 2) the effectiveness of vaccines and antivirals at preventing disease. Both of these parameters preclude us from any intervention that will lessen the severity or alter the course of the infection. In some cases, anti-influenza virus drugs (amantadine, oseltamivir) may be administered to assess their efficacy against certain influenza virus strains.

Once a virus immunization protocol has been established in mice, we will use hamsters to confirm and extend the initial observations.

Provide scientific justification why pain and/or distress could not be relieved

The most accepted model for judging influenza A virus vaccines or antivirals is infection of mice. This experimental procedure has been used since 1933, the year the first influenza A viruses were isolated. The virus strains most often used to challenge mice are WSN, PR8 or X-31, and all of these have a 50% Letha Dose in balb/c mice of approximately 1000 plaque forming units. Since we need to evaluate the extent of protection induced by a vaccine or antiviral, we must allow the infection to proceed to completion, while carefully documenting parameters such as weight loss, lethargy, fur ruffling, or limb paralysis in order to have the most complete assessment of vaccine or antiviral efficacy. The protection experiments with lethal virus doses are the accepted "gold standard" among influenza researchers and are therefore necessary for us to be able to compare our vaccines and antivirals to those studied previously or in other laboratories. Any vaccine or antiviral that progresses to the stage of virus challenge experiments will have shown the ability to induce a protective immune response and therefore will have a high likelihood of providing protection against a lethal influenza virus infection.

Once a virus immunization protocol has been established in mice, we will use hamsters to confirm and extend the initial observations.

Methods or means used to determine that pain and/or distress relief would interfere with test results

The following database searches were performed:

Agricola: "animal welfare"	Agricola: "animal research alternatives"
PubMed: "animal welfare"	PubMed: "animal research alternatives"
PubMed: "respiratory virus model"	PubMed: "virus and lung damage"
CAAT: "respiratory virus model"	CAAT: "virus and lung damage"

"The searches were performed on 12/07/04 and cover the period 2000-2004. Based on nine years experience in this field, in conjunction with periodic consultation of bibliographic sources and a number of references, I believe there is no alternative to performing the potentially painful/distressful procedure(s) contained in this protocol in order to achieve the scientific objectives of my research. Therefore, this...is the most appropriate for conducting my research."

IACUC-Approved Husbandry Variance

Registration Number 43-R-008

Protocol Number 20040185. "Functions of Corticofugal Auditory System"

Principal Investigator: (b)(6),(b)(7)(c)

Animal Used: Bat

Primary Enclosure:

(b)(2)High, (b)(7)(F)

Background: *The Guide for the Care and Use of Laboratory Animals* requires primary enclosures to be sanitized every two weeks.

Specific Exception: Wash down floors three times per week. Disinfect floors and walls every four weeks.

Justification: This will reduce the possibility of injury to the bats, an animal model in short supply. The bats must be netted for flight room disinfection. Being caught in a net is very stressful to the animals and has caused broken wings. Our attempts to repair broken bat wings have failed, resulting in the loss of the animal.

DEC - 4 2006